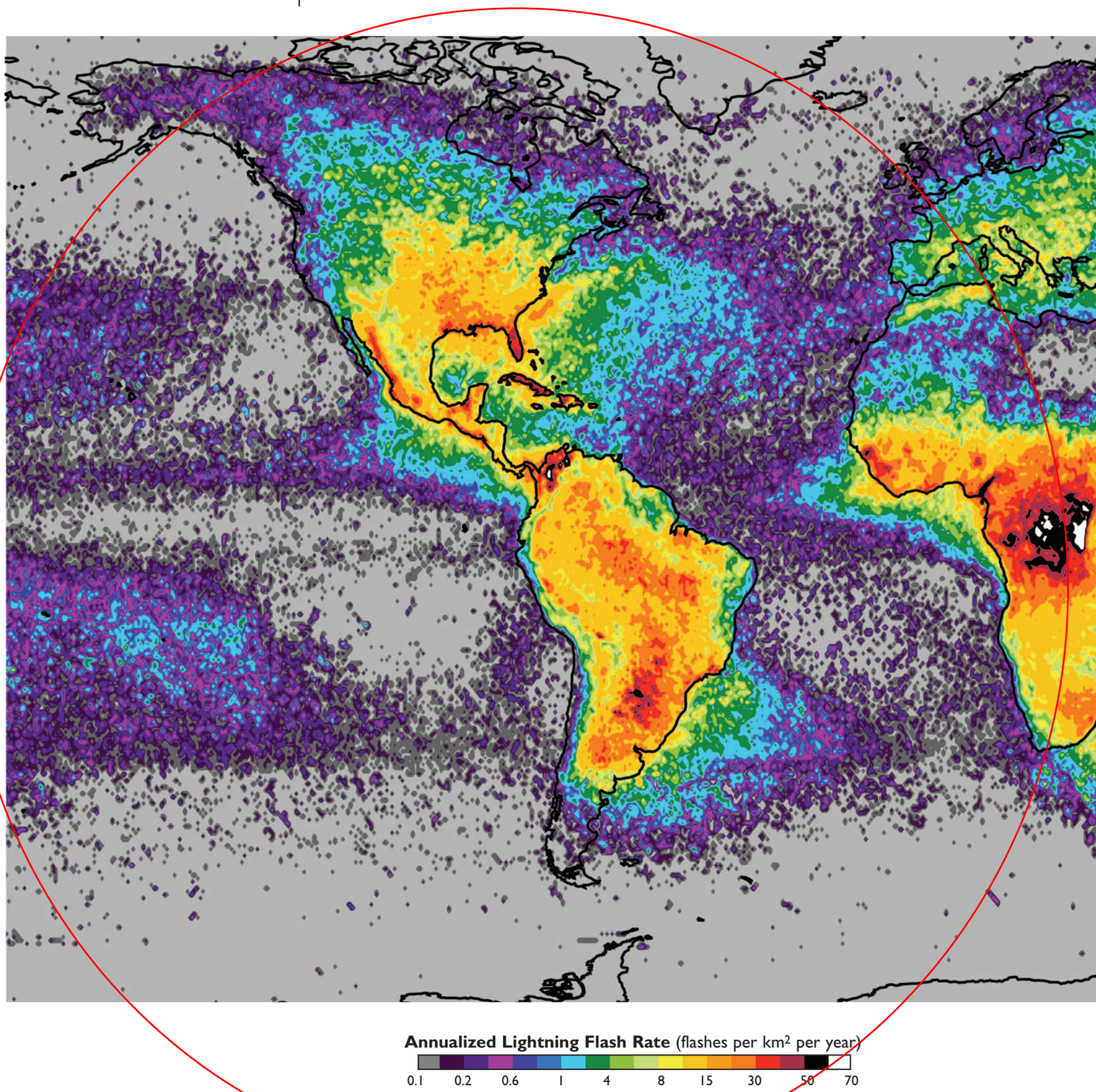
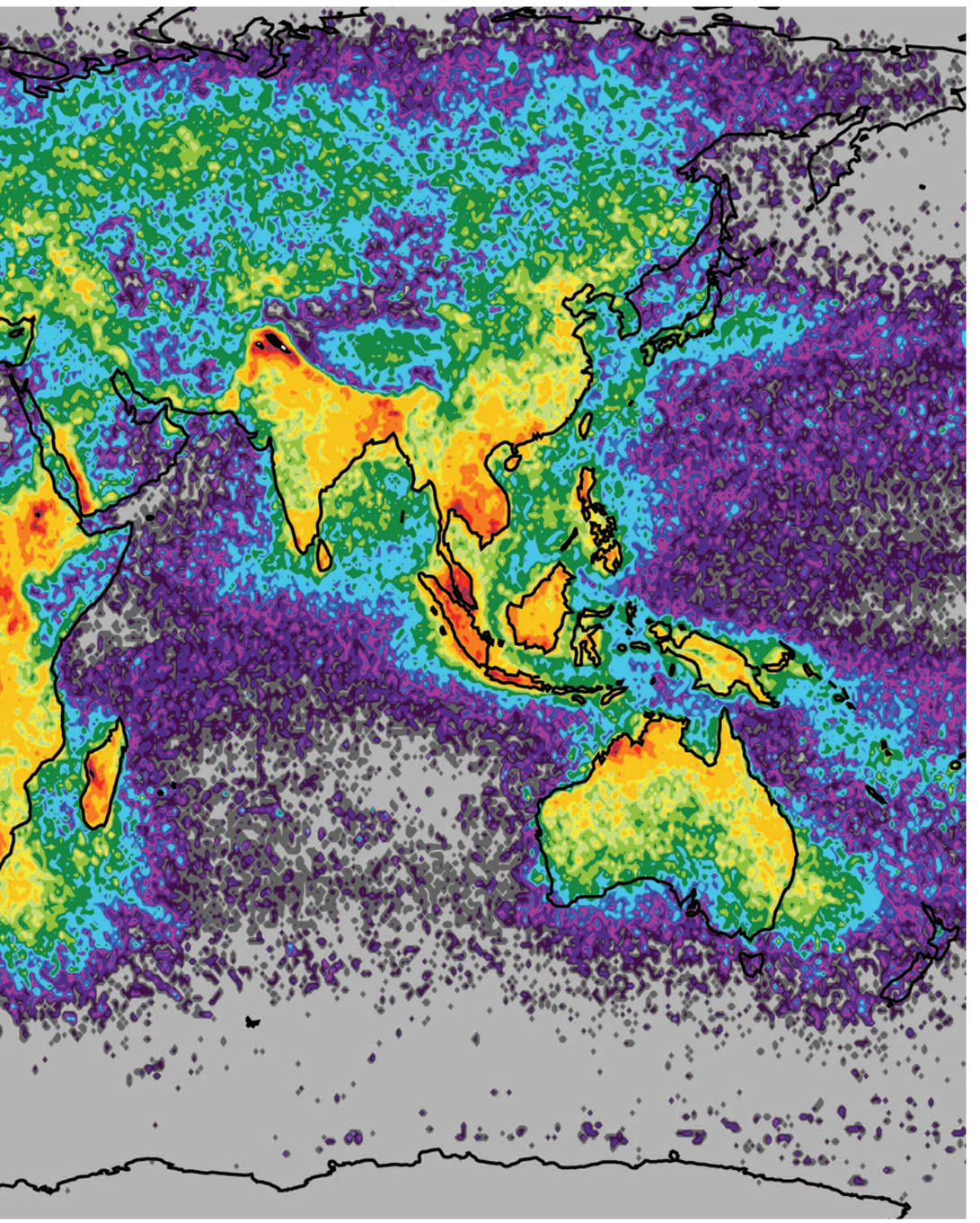


noticeable in Northern Pakistan, where the Himalayas block the poleward flow of moist tropical air. Other areas of enhanced lightning activity include regions frequented by migrating weather systems (e.g., midlatitude cyclones) or widespread convergence (e.g., the Intertropical Convergence Zone).

Seasonally, lightning activity is more prevalent in the summer months (June, July, August for the Northern Hemisphere, December, January, February for the Southern Hemisphere)



Mean annual global lightning flash rate (flashes per km^2 per year) derived from a combined 8 years from April 1995 to February 2003. (Data from the OTD instrument on the OrbView-1 satellite and the LIS instrument on the TRMM satellite.)

than during the winter. Lightning over the oceans tends to occur primarily in the winter months, such as over the Mediterranean Sea and Gulf of Mexico during December, January, February, where thunderstorms develop as cold winter air flowing over the warmer ocean surface produces instability. Lightning activity occurs in all seasons in tropical regions such as central Africa.

The equatorial Congo Basin is the 'hot spot' of the planet, with a maximum annual lightning flash rate of 158 flashes per square kilometer per year (latitude 2.75°S, longitude 27.75°E) in mountainous terrain near Kifuka in the Democratic Republic of the Congo. Lightning occurring in all seasons contributes to this peak in Central Africa. The weather